

WHAT IS CLAIMED IS:

1. A USB-based data security device comprising:
 - a USB mass storage class controller connected to a USB-interfaced operation system for carrying out USB protocol commands issued by the operation system; and
 - a data protection device connecting the USB mass storage class controller to a data storage device, the data protection device comprising a write protection unit, an enciphering unit and a deciphering unit, the write protection unit and the enciphering unit respectively providing write protection of the data storage medium and enciphering data when data are to be written by the operation system into the data storage medium, the deciphering unit deciphering data from the data storage medium when the operation system reads the data from the data storage medium.
2. The USB-based data security device as claimed in Claim 1, wherein the USB mass storage class controller and the data protection device are incorporated in a USB-based data accessing device.
3. The USB-based data security device as claimed in Claim 2, wherein the USB-based data accessing device comprises a USB-based card reader.
4. The USB-based data security device as claimed in Claim 1, wherein the data storage medium comprises a compact flash card.

5. The USB-based data security device as claimed in Claim 1, wherein the data storage medium comprises a multi-media card.
 6. The USB-based data security device as claimed in Claim 1, wherein the data storage medium comprises a memory stick.
- 5 7. The USB-based data security device as claimed in Claim 1, wherein the data storage medium comprises a smart media card.
8. The USB-based data security device as claimed in Claim 1, wherein the data storage medium comprises a security digital card.